

# SEQUENCE LISTING

<110> Civelli Olivier  
Bunzow, James R.  
Grandy, David K.  
Machida, Curtis A.

<120> Dopamine Receptors and Genes

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<150> 07/438544

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Arg Pro His Tyr Asn Tyr Tyr Ala Met Leu Leu Thr Leu Leu Ile Phe

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Ile Ile Val Phe Gly Asn Val Leu Val Cys Met Ala Val Ser Ala Glu				
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Lys Ala Leu Gln Thr Thr Thr Asn Tyr Leu Ile Val Ser Leu Ala Val				
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 His Tyr Asn Tyr Tyr Ala Met Leu Leu Thr Leu Leu Ile Phe Ile Ile  
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 Tyr Ile Lys Ile Tyr Ile Val Leu Arg Lys Arg Arg Lys Arg Val Asn  
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 Thr Lys Arg Ser Ser Arg Ala Phe Arg Ala Asn Leu Lys Thr Pro Leu  
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 Lys Met Trp Asn Phe Gly Asn Phe Trp Cys Glu Phe Trp Thr Ser Ile  
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 Val Gln Arg Tyr Ile Ala Ile Thr Ser Pro Phe Lys Tyr Gln Ser Leu  
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 145 150 155 160  
 Ser Gly Leu Thr Ser Phe Ile Pro Ile Gln Met His Trp Tyr Arg Ala  
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 Thr His Gln Lys Ala Ile Asp Cys Tyr His Arg Glu Thr Cys Cys Asp  
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 Val Ala Lys Arg Gln Leu Gln Lys Ile Lys Glu His Lys Ala Leu Lys  
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260 265 270  
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 Thr Asp Ile Met Val Ser Val Leu Val Ile Pro Met Ala Ala Leu Tyr  
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 Gln Val Leu Asn Asn Trp Thr Leu Gly Gln Val Thr Cys Asp Leu Phe  
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 Val Asn Lys Arg Thr Pro Arg Pro Arg Ala Leu Thr Ser Leu Thr Trp  
 145 150 155 160  
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 165 170 175  
 Pro Glu Asp Arg Ser Asp Pro Asp Ala Cys Thr Ile Ser Lys Asp Met  
 180 185 190  
 Gly Tyr Thr Leu Tyr Ser Thr Phe Gly Ala Phe Tyr Ile Pro Leu Leu  
 195 200 205



Leu Met Leu Val Leu Tyr Gly Arg Ile Phe Arg Ala Ala Arg Phe Arg  
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 Ile Pro Lys Thr Arg Glu Arg Lys Thr Val Lys Thr Leu Gln Ile Ile  
 225 230 235 240  
 Met Gly Leu Phe Ile Leu Cys Trp Leu Pro Phe Phe Ile Val Ala Leu  
 245 250 255  
 Val Leu Pro Pro Cys Glu Ser Ser Cys His Met Pro Thr Ile Leu Gly  
 260 265 270  
 Ala Ile Ile Asn Trp Leu Gly Tyr Ser Asn Ser Leu Ile Asn Pro Val  
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 Ser Phe Lys Val Asn Thr Glu Leu Lys Thr Val Asn Asn Tyr Phe Leu  
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 Val Met Asn Leu Leu Ile Ile Ser Phe Gln Arg Tyr Phe Ser Val Thr  
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 Arg Pro Leu Ser Tyr Arg Ala Lys Thr Arg Pro Arg Arg Ala Ala Leu  
 130 135 140  
 Met Ile Gly Leu Ala Trp Leu Val Ser Phe Val Leu Trp Ala Pro Ala  
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Ile Leu Phe Trp Gln Tyr Leu Val Gly Glu Arg Thr Val Leu Ala Gly  
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 Gln Cys Tyr Ile Gln Phe Leu Ser Gln Pro Ile Ile Thr Phe Gly Thr  
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 Ala Met Ala Ala Phe Tyr Leu Pro Val Thr Val Met Cys Thr Ile Tyr  
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 Cys Val Pro Glu Thr Leu Trp Glu Leu Gly Tyr Trp Ile Gly Tyr Val  
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 Cys Met Ala Ala Phe Asn Ala Ala Phe Asn Phe Val Tyr Ala Ser His  
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 Asn Ile Trp Tyr Phe Gly Arg Ala Phe Cys Tyr Phe Gln Asn Leu Phe  
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 Gln Leu Thr Leu Pro Asp Pro Ser His His Gly Leu His Ser Thr Pro  
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Asp Ser Pro Ala Lys Pro Glu Lys Asn Gly His Ala Lys Arg Thr Thr  
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Pro Arg Ile Ala Lys Ile Phe Glu Ile Gln Thr Met Pro Asn Gly Lys  
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Pro Arg Ile Ala Lys Ile Phe Glu Ile Gln Thr Met Pro Asn Gly Lys  
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Thr Arg Thr Ser Leu Lys Thr Met Ser Arg Arg Lys Xaa Xaa Gln Gln  
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gtg ccc ttc att gtc acc ctg ctg gtc tac atc aag atc tac att gtc Val Pro Phe Ile Val Thr Leu Leu Val Tyr Ile Lys Ile Tyr Ile Val 200 205 210 215			678
ctc cgc aga cgc cgc aag cga gtc aac acc aaa cgc agc agc cga gct Leu Arg Arg Arg Arg Lys Arg Val Asn Thr Lys Arg Ser Ser Arg Ala 220 225 230			726
ttc agg gcc cac ctg agg gct cca cta aag ggc aac tgt act cac ccc Phe Arg Ala His Leu Arg Ala Pro Leu Lys Gly Asn Cys Thr His Pro 235 240 245			774
gag gac atg aaa ctc tgc acc gtt atc atg aag tct aat ggg agt ttc Glu Asp Met Lys Leu Cys Thr Val Ile Met Lys Ser Asn Gly Ser Phe 250 255 260			822
cca gtg aac agg cgg aga gtg gag gct gcc cgg cga gcc cag gag ctg Pro Val Asn Arg Arg Arg Val Glu Ala Ala Arg Arg Ala Gln Glu Leu 265 270 275			870
gag atg gag atg ctc tcc agc acc agc cca ccc gag agg acc cgg tac Glu Met Glu Met Leu Ser Ser Thr Ser Pro Pro Glu Arg Thr Arg Tyr 280 285 290 295			918
agc ccc atc cca ccc agc cac cac cag ctg act ctc ccc gac ccg tcc Ser Pro Ile Pro Pro Ser His His Gln Leu Thr Leu Pro Asp Pro Ser 300 305 310			966
cac cat ggt ctc cac agc act ccc gac agc ccc gcc aaa cca gag aag His His Gly Leu His Ser Thr Pro Asp Ser Pro Ala Lys Pro Glu Lys 315 320 325			1014
aat ggg cat gcc aaa gac cac ccc aag att gcc aag atc ttt gag atc Asn Gly His Ala Lys Asp His Pro Lys Ile Ala Lys Ile Phe Glu Ile 330 335 340			1062

cag acc atg ccc aat ggc aaa acc cgg acc tcc ctc aag acc atg agc 1110  
Gln Thr Met Pro Asn Gly Lys Thr Arg Thr Ser Leu Lys Thr Met Ser  
345 350 355

cgt agg aag ctc tcc cag cag aag gag aag aaa gcc act cag atg ctc 1158  
Arg Arg Lys Leu Ser Gln Gln Lys Glu Lys Lys Ala Thr Gln Met Leu  
360 365 370 375

gcc att gtt ctc ggc gtg ttc atc atc tgc tgg ctg ccc ttc ttc atc 1206  
Ala Ile Val Leu Gly Val Phe Ile Ile Cys Trp Leu Pro Phe Phe Ile  
380 385 390

aca cac atc ctg aac ata cac tgt gac tgc aac atc ccg cct gtc ctg 1254  
Thr His Ile Leu Asn Ile His Cys Asp Cys Asn Ile Pro Pro Val Leu  
395 400 405

tac agc gcc ttc acg tgg ctg ggc tat gtc aac agc gcc gtg aac ccc 1302  
Tyr Ser Ala Phe Thr Trp Leu Gly Tyr Val Asn Ser Ala Val Asn Pro  
410 415 420

atc atc tac acc acc ttc aac att gag ttc cgc aag gcc ttc ctg aag 1350  
Ile Ile Tyr Thr Thr Phe Asn Ile Glu Phe Arg Lys Ala Phe Leu Lys  
425 430 435

atc ctc cac tgc tgactctgct gcctgcccgc acagcagcct gcttcccacc 1402  
Ile Leu His Cys  
440

tccctgcccga ggccggccag cctcaccctt gcgaaccgtg agcaggaagg cctgggtgga 1462

tcggcctcct cttcttagcc ccggcaggcc ctgcagtgtt cgcttggtc catgctcctc 1522

actgcccga caccctcact ctgccagggc agtgctagtg agctgggcat ggtaccagcc 1582

ctggggctgg cccagctca ggggcagctc atagagtccc cctcccacc tccagtcccc 1642

ctatccttgg caccaaagat gcagccgcct tccttgacct tcctctgggg ctctagggtt 1702

gctggagcct gagtcagggc ccagaggctg agttttctct ttgtggggct tggcgtggag 1762

caggcggtgg ggagagatgg acagttcaca ccctgcaagg cccacaggag gcaagcaagc 1822

tctcttgccg aggagccagg caacttcagt cctgggagac ccatgtaaat accagactgc 1882

aggttggacc ccaaggattc ccaagccaaa aaccttagct ccctccgca cccgatgtg 1942

gacctctact ttccaggcta gtccggacct acctacccc gttacagctc cccaagtgg 2002

ttccacatgc tctgagaaga ggagccctca tcttgaaggg cccaggaggg tctatgggga 2062

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gcaaaacac tttccttttc tattccttct ggcctttcct ctctcctgtt tcccttcct 2302  
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 Asn Trp Ser Arg Pro Phe Asn Gly Ser Asp Gly Lys Ala Asp Arg Pro  
                   20                  25                  30  
 His Tyr Asn Tyr Tyr Ala Thr Leu Leu Thr Leu Leu Ile Ala Val Ile  
           35                  40                  45  
 Val Phe Gly Asn Val Leu Val Cys Met Ala Val Ser Arg Glu Lys Ala  
       50                  55                  60  
 Leu Gln Thr Thr Thr Asn Tyr Leu Ile Val Ser Leu Ala Val Ala Asp  
   65                  70                  75                  80  
 Leu Leu Val Ala Thr Leu Val Met Pro Trp Val Val Tyr Leu Glu Val  
                   85                  90                  95  
 Val Gly Glu Trp Lys Phe Ser Arg Ile His Cys Asp Ile Phe Val Thr  
           100                  105                  110  
 Leu Asp Val Met Met Cys Thr Ala Ser Ile Leu Asn Leu Cys Ala Ile  
       115                  120                  125  
 Ser Ile Asp Arg Tyr Thr Ala Val Ala Met Pro Met Leu Tyr Asn Thr  
   130                  135                  140  
 Arg Tyr Ser Ser Lys Arg Arg Val Thr Val Met Ile Ser Ile Val Trp  
 145                  150                  155                  160  
 Val Leu Ser Phe Thr Ile Ser Cys Pro Leu Leu Phe Gly Leu Asn Asn  
                   165                  170                  175  
 Ala Asp Gln Asn Glu Cys Ile Ile Ala Asn Pro Ala Phe Val Val Tyr  
           180                  185                  190  
 Ser Ser Ile Val Ser Phe Tyr Val Pro Phe Ile Val Thr Leu Leu Val  
       195                  200                  205  
 Tyr Ile Lys Ile Tyr Ile Val Leu Arg Arg Arg Arg Lys Arg Val Asn  
   210                  215                  220



Thr Lys Arg Ser Ser Arg Ala Phe Arg Ala His Leu Arg Ala Pro Leu  
 225 230 235 240  
 Lys Gly Asn Cys Thr His Pro Glu Asp Met Lys Leu Cys Thr Val Ile  
 245 250 255  
 Met Lys Ser Asn Gly Ser Phe Pro Val Asn Arg Arg Arg Val Glu Ala  
 260 265 270  
 Ala Arg Arg Ala Gln Glu Leu Glu Met Glu Met Leu Ser Ser Thr Ser  
 275 280 285  
 Pro Pro Glu Arg Thr Arg Tyr Ser Pro Ile Pro Pro Ser His His Gln  
 290 295 300  
 Leu Thr Leu Pro Asp Pro Ser His His Gly Leu His Ser Thr Pro Asp  
 305 310 315 320  
 Ser Pro Ala Lys Pro Glu Lys Asn Gly His Ala Lys Asp His Pro Lys  
 325 330 335  
 Ile Ala Lys Ile Phe Glu Ile Gln Thr Met Pro Asn Gly Lys Thr Arg  
 340 345 350  
 Thr Ser Leu Lys Thr Met Ser Arg Arg Lys Leu Ser Gln Gln Lys Glu  
 355 360 365  
 Lys Lys Ala Thr Gln Met Leu Ala Ile Val Leu Gly Val Phe Ile Ile  
 370 375 380  
 Cys Trp Leu Pro Phe Phe Ile Thr His Ile Leu Asn Ile His Cys Asp  
 385 390 395 400  
 Cys Asn Ile Pro Pro Val Leu Tyr Ser Ala Phe Thr Trp Leu Gly Tyr  
 405 410 415  
 Val Asn Ser Ala Val Asn Pro Ile Ile Tyr Thr Thr Phe Asn Ile Glu  
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 Phe Arg Lys Ala Phe Leu Lys Ile Leu His Cys  
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 <213> Rattus norvegicus

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aac tgg agc cgg ccc ttc aat ggg tca gaa ggg aag gca gac agg ccc	96
Asn Trp Ser Arg Pro Phe Asn Gly Ser Glu Gly Lys Ala Asp Arg Pro	
20 25 30	
cac tac aac tac tat gcc atg ctg ctc acc ctc ctc atc ttt atc atc	144
His Tyr Asn Tyr Tyr Ala Met Leu Leu Thr Leu Leu Ile Phe Ile Ile	
35 40 45	
gtc ttt ggc aat gtg ctg gtg tgc atg gct gta tcc cga gag aag gct	192
Val Phe Gly Asn Val Leu Val Cys Met Ala Val Ser Arg Glu Lys Ala	
50 55 60	
ttg cag acc acc acc aac tac ttg ata gtc agc ctt gct gtg gct gat	240
Leu Gln Thr Thr Thr Asn Tyr Leu Ile Val Ser Leu Ala Val Ala Asp	
65 70 75 80	
ctt ctg gtg gcc aca ctg gta atg ccg tgg gtt gtc tac ctg gag gtg	288
Leu Leu Val Ala Thr Leu Val Met Pro Trp Val Val Tyr Leu Glu Val	
85 90 95	
gtg ggt gag tgg aaa ttc agc agg att cac tgt gac atc ttt gtc act	336
Val Gly Glu Trp Lys Phe Ser Arg Ile His Cys Asp Ile Phe Val Thr	
100 105 110	
ctg gat gtc atg atg tgc aca gca agc atc ctg aac ctg tgt gcc atc	384
Leu Asp Val Met Met Cys Thr Ala Ser Ile Leu Asn Leu Cys Ala Ile	
115 120 125	
agc att gac agg tac aca gct gtg gca atg ccc atg ctg tat aac aca	432
Ser Ile Asp Arg Tyr Thr Ala Val Ala Met Pro Met Leu Tyr Asn Thr	
130 135 140	
cgc tac agc tcc aag cgc cga gtt act gtc atg att gcc att gtc tgg	480
Arg Tyr Ser Ser Lys Arg Arg Val Thr Val Met Ile Ala Ile Val Trp	
145 150 155 160	
gtc ctg tcc ttc acc atc tcc tgc cca ctg ctc ttc gga ctc aac aat	528
Val Leu Ser Phe Thr Ile Ser Cys Pro Leu Leu Phe Gly Leu Asn Asn	
165 170 175	
aca gac cag aat gag tgt atc att gcc aac cct gcc ttt gtg gtc tac	576
Thr Asp Gln Asn Glu Cys Ile Ile Ala Asn Pro Ala Phe Val Val Tyr	
180 185 190	
tcc tcc att gtc tca ttc tac gtg ccc ttc atc gtc act ctg ctg gtc	624
Ser Ser Ile Val Ser Phe Tyr Val Pro Phe Ile Val Thr Leu Leu Val	
195 200 205	
tat atc aaa atc tac atc gtc ctc cgg aag cgc cgg aag cgg gtc aac	672
Tyr Ile Lys Ile Tyr Ile Val Leu Arg Lys Arg Arg Lys Arg Val Asn	
210 215 220	
acc aag cgc agc agt cga gct ttc aga gcc aac ctg aag aca cca ctc	720
Thr Lys Arg Ser Ser Arg Ala Phe Arg Ala Asn Leu Lys Thr Pro Leu	
225 230 235 240	
aag gat gct gcc cgc cga gct cag gag ctg gaa atg gag atg ctg tca	768

Lys	Asp	Ala	Ala	Arg	Arg	Ala	Gln	Glu	Leu	Glu	Met	Glu	Met	Leu	Ser	
				245					250					255		
agc	acc	agc	ccc	cca	gag	agg	acc	cgg	tat	agc	ccc	atc	cct	ccc	agt	816
Ser	Thr	Ser	Pro	Pro	Glu	Arg	Thr	Arg	Tyr	Ser	Pro	Ile	Pro	Pro	Ser	
			260					265					270			
cac	cac	cag	ctc	act	ctc	cct	gat	cca	tcc	cac	cac	ggc	cta	cat	agc	864
His	His	Gln	Leu	Thr	Leu	Pro	Asp	Pro	Ser	His	His	Gly	Leu	His	Ser	
		275					280					285				
aac	cct	gac	agt	cct	gcc	aaa	cca	gag	aag	aat	ggg	cac	gcc	aag	att	912
Asn	Pro	Asp	Ser	Pro	Ala	Lys	Pro	Glu	Lys	Asn	Gly	His	Ala	Lys	Ile	
	290					295					300					
gtc	aat	ccc	agg	att	gcc	aag	ttc	ttt	gag	atc	cag	acc	atg	ccc	aat	960
Val	Asn	Pro	Arg	Ile	Ala	Lys	Phe	Phe	Glu	Ile	Gln	Thr	Met	Pro	Asn	
305					310					315					320	
ggc	aaa	acc	cgg	acc	tcc	ctt	aag	acg	atg	agc	cgc	aga	aag	ctc	tcc	1008
Gly	Lys	Thr	Arg	Thr	Ser	Leu	Lys	Thr	Met	Ser	Arg	Arg	Lys	Leu	Ser	
			325						330					335		
cag	cag	aag	gag	aag	aaa	gcc	act	cag	atg	ctt	gcc	att	gtt	ctc	gcc	1056
Gln	Gln	Lys	Glu	Lys	Lys	Ala	Thr	Gln	Met	Leu	Ala	Ile	Val	Leu	Ala	
			340					345					350			
gtc	aac	ccc	atc	atc	tac	acc	acc	ttc	aac	atc	gag	ttc	cgc	aag	gcc	1104
Val	Asn	Pro	Ile	Ile	Tyr	Thr	Thr	Phe	Asn	Ile	Glu	Phe	Arg	Lys	Ala	
		355					360					365				
ttc	atg	aag	gat	tgc	aac	atc	cca	cca	gtc	ctc	tac	agc	gcc	ttc	aca	1152
Phe	Met	Lys	Asp	Cys	Asn	Ile	Pro	Pro	Val	Leu	Tyr	Ser	Ala	Phe	Thr	
	370					375					380					
tgg	ctg	ggc	tat	gtc	aac	agt	gcc	gtc	aac	ccc	atc	atc	tac	acc	acc	1200
Trp	Leu	Gly	Tyr	Val	Asn	Ser	Ala	Val	Asn	Pro	Ile	Ile	Tyr	Thr	Thr	
385					390					395					400	
ttc	aac	atc	gag	ttc	cgc	aag	gcc	ttc	atg	aag	atc	ttg	cac	tgc	tga	1248
Phe	Asn	Ile	Glu	Phe	Arg	Lys	Ala	Phe	Met	Lys	Ile	Leu	His	Cys		
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 <213> Rattus norvegicus

<400> 13  
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 Asn Trp Ser Arg Pro Phe Asn Gly Ser Glu Gly Lys Ala Asp Arg Pro  
 20 25 30  
 His Tyr Asn Tyr Tyr Ala Met Leu Leu Thr Leu Leu Ile Phe Ile Ile

35					40					45					
Val	Phe	Gly	Asn	Val	Leu	Val	Cys	Met	Ala	Val	Ser	Arg	Glu	Lys	Ala
50					55					60					
Leu	Gln	Thr	Thr	Thr	Asn	Tyr	Leu	Ile	Val	Ser	Leu	Ala	Val	Ala	Asp
65					70					75					80
Leu	Leu	Val	Ala	Thr	Leu	Val	Met	Pro	Trp	Val	Val	Tyr	Leu	Glu	Val
				85					90					95	
Val	Gly	Glu	Trp	Lys	Phe	Ser	Arg	Ile	His	Cys	Asp	Ile	Phe	Val	Thr
			100					105					110		
Leu	Asp	Val	Met	Met	Cys	Thr	Ala	Ser	Ile	Leu	Asn	Leu	Cys	Ala	Ile
		115					120					125			
Ser	Ile	Asp	Arg	Tyr	Thr	Ala	Val	Ala	Met	Pro	Met	Leu	Tyr	Asn	Thr
	130					135					140				
Arg	Tyr	Ser	Ser	Lys	Arg	Arg	Val	Thr	Val	Met	Ile	Ala	Ile	Val	Trp
145				150						155					160
Val	Leu	Ser	Phe	Thr	Ile	Ser	Cys	Pro	Leu	Leu	Phe	Gly	Leu	Asn	Asn
			165						170					175	
Thr	Asp	Gln	Asn	Glu	Cys	Ile	Ile	Ala	Asn	Pro	Ala	Phe	Val	Val	Tyr
		180						185					190		
Ser	Ser	Ile	Val	Ser	Phe	Tyr	Val	Pro	Phe	Ile	Val	Thr	Leu	Leu	Val
		195					200					205			
Tyr	Ile	Lys	Ile	Tyr	Ile	Val	Leu	Arg	Lys	Arg	Arg	Lys	Arg	Val	Asn
	210					215					220				
Thr	Lys	Arg	Ser	Ser	Arg	Ala	Phe	Arg	Ala	Asn	Leu	Lys	Thr	Pro	Leu
225						230					235				240
Lys	Asp	Ala	Ala	Arg	Arg	Ala	Gln	Glu	Leu	Glu	Met	Glu	Met	Leu	Ser
			245						250					255	
Ser	Thr	Ser	Pro	Pro	Glu	Arg	Thr	Arg	Tyr	Ser	Pro	Ile	Pro	Pro	Ser
			260					265					270		
His	His	Gln	Leu	Thr	Leu	Pro	Asp	Pro	Ser	His	His	Gly	Leu	His	Ser
		275					280					285			
Asn	Pro	Asp	Ser	Pro	Ala	Lys	Pro	Glu	Lys	Asn	Gly	His	Ala	Lys	Ile
	290					295					300				
Val	Asn	Pro	Arg	Ile	Ala	Lys	Phe	Phe	Glu	Ile	Gln	Thr	Met	Pro	Asn
305						310					315				320
Gly	Lys	Thr	Arg	Thr	Ser	Leu	Lys	Thr	Met	Ser	Arg	Arg	Lys	Leu	Ser
			325						330					335	
Gln	Gln	Lys	Glu	Lys	Lys	Ala	Thr	Gln	Met	Leu	Ala	Ile	Val	Leu	Ala

	340		345		350										
Val	Asn	Pro	Ile	Ile	Tyr	Thr	Thr	Phe	Asn	Ile	Glu	Phe	Arg	Lys	Ala
	355						360					365			
Phe	Met	Lys	Asp	Cys	Asn	Ile	Pro	Pro	Val	Leu	Tyr	Ser	Ala	Phe	Thr
	370					375					380				
Trp	Leu	Gly	Tyr	Val	Asn	Ser	Ala	Val	Asn	Pro	Ile	Ile	Tyr	Thr	Thr
385					390					395					400
Phe	Asn	Ile	Glu	Phe	Arg	Lys	Ala	Phe	Met	Lys	Ile	Leu	His	Cys	
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ggtgcaggag g 11

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ccccccaggcg t

11